FOREST CONTROL *by* CONTINUOUS INVENTORY

"Today I have grown taller from walking with the trees."

...Karle Wilson

Milwaukee, Wis. December, 1959 No. 69

1859 - - - 1959 - - - 2059

"They ought to have looked forward meekly to the prodigious feats of posterity but, having too little faith, and too much conceit, they were content to look behind and make comparison with the past.

"They did not foresee the miraculous generation which is us."

"The Old Wives Tale"

Arnold Bennett

The Falcon

LET'S BE FRANK IN THE INTEREST OF PROGRESS

How careless we find the work of those who measure standing timber. There is no doubt about it at all; many foresters lack training in the precise techniques essential to good permanent plot work in timber cruising. An administrative and an academic lag have been in evidence for a long, long time in this facet of forestry.

If there are any who are capable of teaching safe and sound cruising methods we often find them instead, fussing about with fearsome scientific formulas intended, as they say, to increase the efficiency of the cruising job. It does very little good, foresters, to drape a heavy cloak of scientific method over the frail frame of faulty facts which come from poor woods work. The high-priced tool and the super-scientific approach are no substitute for slow, precise, standardized, manual procedures in the woods. Permanent tree and plot records in both inventory and research demand better techniques, more careful workmanship and much more intensive supervision.

The size, shape and condition of individual trees are most important in permanent plot work. CFI sampling involves relatively few trees and so their dimensions and volumes must be true and reliable. There are simple guides to help us secure this reliability.

We should accept and use the length measuring pole. More than half, and sometimes three-fourths of our tree lengths in lake states projects are directly measurable with a common, ordinary, one dollar, 20-foot bamboo pole. Why delay putting this simple tool to work?

We should use tree culling guides and sounding tools to help us deduct for the unsound scale in standing trees.

We should carry with us in the woods taper rules and tables, and we should use the Girard form class to guide our decisions on the top diameters of sawlog and pulpwood trees. I do not like the way we have dropped the old master's form quotient now that he is gone.

We should soon realize that we cannot judge tree dimensions and conditions from one side of the tree only, but that we must take time to examine many of the trees from two sides, preferably at right angles.

We should perfect and standardize our diameter tape techniques, and this important point deserves special discussion.

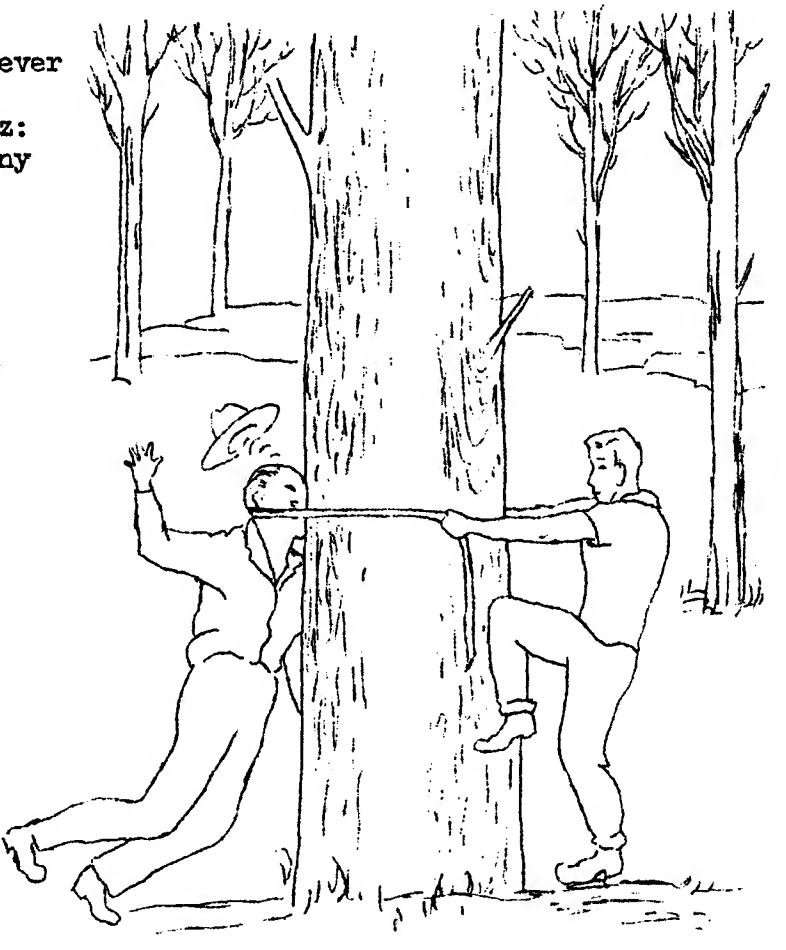
I have spent a long time in the work of a forester but few are the men I find who use the diameter tape with the consistency and finesse of Jim Averell of Region 5 who taught me his methods in 1927. Many errors are made in taking the one and only tree dimension which is actually capable of being manually measured to a rather fine degree of accuracy. Perhaps these errors are made because we are still thinking in terms of the rough measurements we used to make with tree calipers and Biltmore sticks. It is altogether possible that mentally we still hark back to the old days of strip cruising and we do not realize that we are working now in a new era of more finite accuracy. Old ways cling like Missouri ticks and are even more annoying and infectious. No one knows better than I how difficult it is to break away from the methods of the past, but it must be done. The diameter tape is a fare more demanding tool than the snake killer - walking cane-cruiser stick of olden days.

How serious is this diameter tape problem? Well, one year's diameter growth in the Lake States seldom averages more than 1/10". In the customary CFI growth measurement interval of five years, an error of 1/10" is an error of one year's growth in five, and this is an individual tree error of 20%. For the average pulpwood tree in Region 9, a mistake of 1/10" in tree diameter causes a 4% error in cordwood volume. This is the equivalent of a two-foot length error. Furthermore, faulty diameter tape measurements are consistently high because the tape sags on the posterior of the tree. I must contend that these errors caused by careless diameter tape use are not nearly so insignificant as they look and I must declare that these errors need not occur.

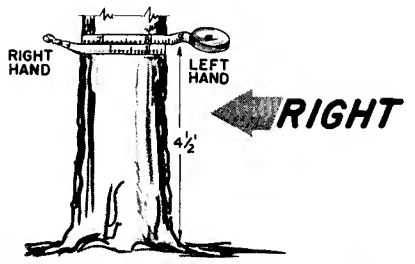
It can be demonstrated by a professional, that it is quite possible to measure pulpwood trees repeatedly to within 3/100" of the true tape diameter. Tree measurement records need not ever disperse more widely than this about a weighted average. Ninety-five men out of 100 can measure 95 trees out of 100 to this fine degree of accuracy 95% of the time. Exceptions occur only with the occasional large, rough, shag-barked, deformed, heavy tapering, leaning or bark-flaking tree.

Diameter tape techniques can be perfected by any cruiser who makes a conscious effort to perfect them, after he has learned to accept the need for this refinement. The best way in the world to teach proper tape use is to measure trees, in training, to hundredths of inches. The professional tape user will have lower diameters than the neophyte for a long time but eventually the fluctuations will randomize. There is scarcely ever quite enough time given to demonstration, training, supervision, and measured check of diameter tape use. Consistent care with the tape will reduce diameter errors and provide more reliable data for growth determination. We must never forget a favorite professional platitude of Suren R. Gevorkiantz: "You should know," he told me many years ago, "that personal errors do not compensate".

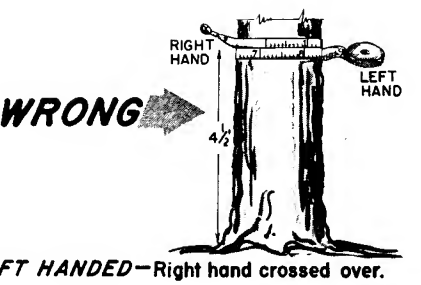
CAL STOTT,
Forester



USING THE DIAMETER TAPE



LEFT HANDED—Right hand crossed under.



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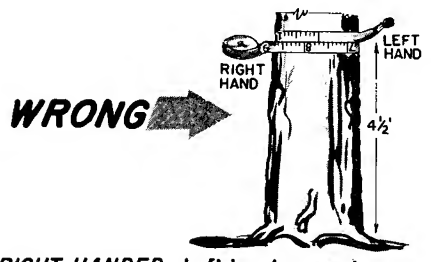

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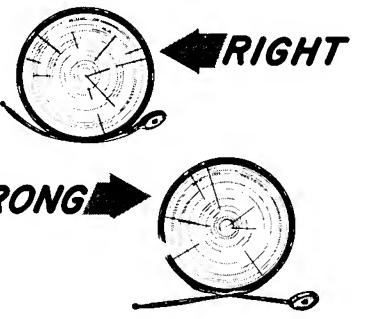
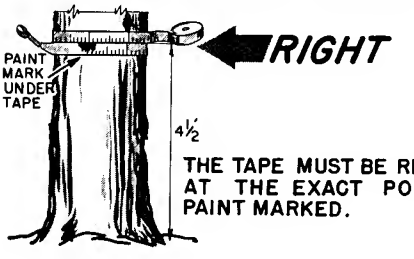


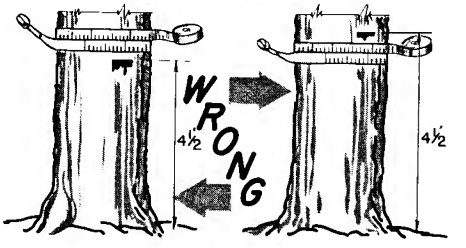
BE SURE TO MEASURE AT THE MARK

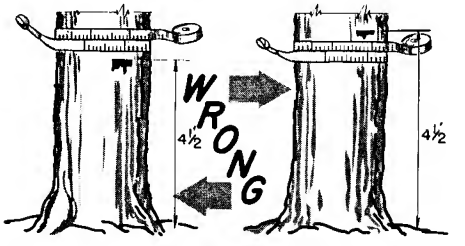


THE TAPE MUST BE READ AT THE EXACT POINT PAINT MARKED.

TAPE MUST BE PULLED STRAIGHT

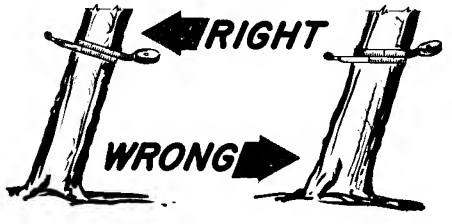
ALWAYS ASSUME THAT THE 4½ ft. D.B.H. POINT IS AT THE TOP OF THE PAINT MARK PUT TOP OF LOWER TAPE AT THIS POINT.



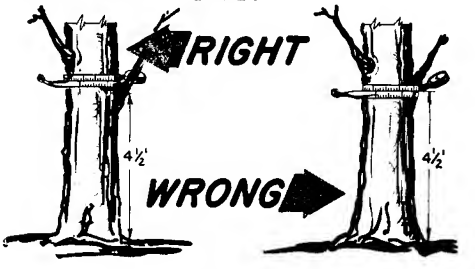


ALWAYS ASSUME THAT THE 4½ ft. D.B.H. POINT IS AT THE TOP OF THE PAINT MARK PUT TOP OF LOWER TAPE AT THIS POINT.

THE TAPE MUST BE AT RIGHT ANGLES TO THE LEAN OF THE TREE.



DON'T PLACE TAPE AT AN ABNORMAL PLACE ON THE BOLE.



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